

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

No claims are currently being cancelled.

Claims 1, 17 and 19 are currently being amended.

Claims 21 and 22 are currently being added.

This reply amends and adds claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending and adding the claims as set forth above, claims 1-22 are now pending in this application.

Indication of Allowable Subject Matter Re: Claim 7:

Applicants appreciate the indication of allowable subject matter made in the Office Action with respect to claim 7.

Objection to Claims 17 and 19:

In the Office Action, claims 17 and 19 were objected to because of an informality in those claims. Claims 17 and 19 have been corrected in accordance with the suggestion made in the Office Action.

Indefiniteness Rejection of Claims 1-9:

In the Office Action, claims 1-9 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite, because “the predetermined pattern” recited in claim 1, line 8 allegedly lacks antecedent basis. Claim 1 has been amended to provide antecedent basis for “the predetermined pattern” on line 4 of that claim.

Claim Rejections – Prior Art:

In the Office Action, claims 1-2, 4-6 and 8-19 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,312,082 to Lund et al.; and claims 3 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lund et al. in view of U.S.

Patent No. 4,907,013 to Hubbard et al. These rejections are traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

In Lund, the patterns of clear fixer are applied as a fractional fill pattern (see column 5 lines 36-38 of Lund). This is confirmed by the representation of the rectangular bars 305 in Figure 3 of Lund. For the avoidance of doubt, it is noted that the different patterns shown in the four strips 303 of Figure 3 are not real, but schematically represent the different colors (Cyan, Magenta, Yellow and Black) in black and white shading (see column 5, lines 23-25 of Lund).

This is to be contrasted with the method recited in presently pending independent claim 1, in which the fixer is applied in spaced parallel lines to a region of media, rather than being applied as a fractional fill pattern as is done in Lund. The bars 305 in Lund cannot be regarded as “relatively thick lines”, because the pending independent claim 1 clearly specifies that each of the spaced parallel lines is applied by a respective fixer nozzle. In Lund, the height of each bar 305 is equal to the swath height, which corresponds to the printhead height. It is well-known in the technical field of printing that a printhead comprises a large number of nozzles, so that the printhead height is a large multiple of the nozzle spacing. In Lund, the fixer deposits applied by directly adjacent nozzles are themselves directly adjacent and not spaced on a region of media, as required by presently pending independent claim 1.

The above distinctions provide the feature that the method of the present invention is accurate enough to detect the performance of individual nozzles by optically detecting the predetermined pattern of spaced parallel lines on a region of media. There is not believed to be any way in which the relatively coarse bar patterns disclosed in Lund could be used to detect the performance of individual nozzles.

Since claims 2 to 9 are dependent from claim 1, and since claim 1 is believed to be allowable for the above reasons, claims 2 to 9 are also believed to be allowable. With reference to U.S. Patent No. 5,635,969 to Allen, this does not appear to be relevant to claims 4, 5, 6, 8 and 9 because it relates to a method of normal printing rather than checking nozzle defects.

Although the Office Action has not made any detailed remarks concerning claims 10 to 13, it is believed that these claims are also patentably distinct over Lund. For example,

Lund mentions at column 3, lines 3-4 that bleeding of the clear fixer and the color ink occurs, which is directly contrary to part (iii) of presently pending independent claim 10.

Although the Office Action has not made any detailed remarks concerning presently pending independent claim 14, this claim is believed to be allowable for the same reasons as claim 1 as stated above. Thus claims 15 to 20, being dependent from claim 14, are also believed to be allowable.

With regard to paragraph 7 of the Office Action, Lund is believed not to be relevant for the reasons given above. Hubbard is also believed not to be relevant, since it relates to detecting only ink nozzle (not fixer nozzle) malfunction, and at the very least Hubbard does not rectify the above-mentioned deficiencies of Lund. Still further, there is no reason why a person skilled in the art could consider combining the contents of Lund and Hubbard.

New Claims 21 and 22:

New claims 21 and 22 have been added to recite additional features of the present invention that are believed to provide a separate basis of patentability for those claims.

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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